Generic Neutrino Interaction Event Selection Task Force Update

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Summary of First Meeting, Dec. 13th

- Deliverable: Flexible, generic neutrino event selection widely applicable to different topologies.
  - Does not necessarily need to have exact same implementation in any analysis.
  - Intended to motivate analysis and software development.
  - Start measuring efficiencies and purities of reconstruction packages for various variables and phase spaces.
- Current work using CAFs and pass-through h5 MLReco files to make validation plots.

- Problems Discussed:
  - Low statistics in PicoRun 4.1 (~2k saved spills, 1E17).
  - Backtracking information in CAF not fully available (being fixed currently).
    - Pandora and MLReco pass-through info has much more detailed backtracking info than CAFs currently.
  - Hit-level information missing in CAFs, very important for debugging given experience in MicroBooNE.

- Solutions:
  - >1E19 data sets (coming with MiniRun5!)
  - Metadata provided to intermediate Pandora and MLReco files to be able to match to CAF files and enable complete truth and deposition-level info for each event.
  - Given restrictions above, members will independently explore event selection techniques and validation plots with a goal to merge findings at the Collaboration Meeting.